

REMARKS

This application has been reviewed in light of the Office Action dated March 18, 2008. Claims 1-14 are presented for examination, of which Claims 1, 7 and 12 are in independent form. Claims 1, 7 and 12 have been amended to define still more clearly what Applicant regards as his invention. Favorable reconsideration is respectfully requested.

In the outstanding Office Action, Claims 1, 7 and 12 were rejected under the sixth paragraph of 35 U.S.C. § 112 for specifying no function by the words following the word “means” (or “steps”)^{1/}.

While not agreeing with the Examiner^{2/}, Applicant has amended the claims so that the word “means” (or “step”) is only followed by words that specify the function corresponding to the means (or step).

In addition, Claims 1-14 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patents 6,853,465 (Ohnishi) and 6,490,055 (Shimizu), taken in combination.

^{1/}The Office Action stated that the word “means” (or step) is preceded by the word(s) “for the object between the edges,” but the word “means” is apparently followed by those words.

^{2/}The Office Action stated that the word “means” (or “steps”) was followed by the words “for the object between the edges” in these claims. Applicant notes that while those words follow the word “means,” they plainly are not meant to specify the function corresponding to the means, specifically the first rendering means. The first rendering means is referenced in the definition of the control means, and those words are meant to specify how the first rendering means is used by the control means. The function of the first rendering means is specified in the definition of the first rendering means by the words “for developing rendering instructions...”

As discussed in the specification and the Amendment of December 27, 2007, there are several conventional types of color image processing by printer drivers. One is the high-quality mode consisting of 1) multivalue rendering, 2) color correction, 3) color conversion, and 4) binarization in that order. Another is the CMYK high-speed mode consisting of 1) color correction, 2) color conversion, 3) binarization, and 4) binary rendering in that order.

Claim 1 recites, among other features, “first rendering means for developing rendering instructions of each line into multivalued bitmap data (multivalue rendering) and subjecting the multivalued bitmap data to color processing (color correction and color conversion) and n-value conversion processing (binarization); second rendering means for subjecting the rendering instructions to color processing (color correction and color conversion) and n-value conversion processing (binarization) color by color of the rendering instructions, storing the results in the form of an n-valued pattern, and rendering the n-valued pattern of each line into n-valued bitmap data (binary rendering); ... wherein said control means causes said first rendering means or said second rendering means to develop the rendering instruction into bitmap data line by line [parenthesized expressions added].”

Applicant notes that the first rendering means of Claim 1 is similar to the high-quality mode except that the entire process applies to one scanning line at a time. Furthermore, the second rendering means of Claim 1 is similar to the CMYK high-speed mode except that the last step – binary rendering – applies to one scanning line at a time. Developing rendering instructions into bitmap data one line at a time allows the image

processing to be highly attuned to the nature of rendering instructions and provides high flexibility to the rendering process.

On the other hand, *Ohnishi* relates merely to an image processing method similar to the high-quality mode except that the last two steps – color conversion and binarization – apply to one scanning line at a time with respect to the “objects” of the image (see Fig. 3 and col. 4, lines 5-22, of *Ohnishi*, for example). Accordingly, the second rendering means among other things is not disclosed in *Ohnishi*.

The portion of *Ohnishi* cited in Para. 4 of the Office Action as disclosing the first rendering means and the second rendering means is as follows.

“While referring to the pattern plane, color conversion, which is consonant with the attribute of an object, is performed for the obtained multi-value bit map, and the resultant bit map is binarized (n-valued) to obtain a device bit map. When the processing has been completed for the overall image, the device bit map is transmitted to the printer. Color correction may be performed either before or after the color data have been used to generate the bit map [emphases added].” Col. 4, lines 15-22.

Applicant submits that the second emphasized part above indicates that the first two steps of the high-quality mode – multivalue rendering and color correction – may be carried out in either order. The first emphasized part above indicates that the last two steps of the high-quality mode – color conversion and binarization – are carried out with respect to the objects of the image in terms of pattern planes. It is not clear to Applicant how the cited portion could have disclosed the second rendering means, which involves binary rendering as the last step rather than multivalue rendering as the first step, or how it could have disclosed the first rendering means and the second means at the same time.

In addition, the portion of *Ohnishi* cited as disclosing the determining means is as follows.

“FIG. 2 is a conceptual diagram showing a process during which data, which is associated with an image processing control program and which is stored in the storage device of a medium reading unit, is read by a central processing unit and a print command is input by an input unit for the transmission of data to a printer.” Col. 2, lines 14-19.

This portion discusses merely the storage and reading of an image processing control program or a printer driver and the inputting of a print command. It does not contain any reference to the reading of rendering instructions and the determination of whether any of the rendering instructions contain any overwrite.

Furthermore, *Shimizu* discusses band rendering vs. degrade rendering as well as hardware rendering vs. software rendering. However, the rendering instructions are not developed into bitmap data one line at a time (see Col 7. lines 36-45, for example). Therefore, *Shimizu* is not believed to remedy the deficiencies of *Ohnishi*.

Accordingly, for at least the reasons noted above, Claim 1 is believed to be allowable over *Ohnishi* and *Shimizu*, taken separately or in any permissible combination (if any).

Independent Claims 7 and 12 are directed, respectively, to a method and a printer driver, and correspond to apparatus Claim 1, and are believed to be patentable for at least the same reasons as discussed above in connection with Claim 1.

A review of the other art of record has failed to reveal anything which, in Applicant’s opinion, would remedy the deficiencies of the art discussed above, as references against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the

same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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